

## CLAIMS

- Sub 12
1. In a spread spectrum communication system, a method for transmitting data from a plurality of transmission sources, comprising:
- defining time slots for data transmission, wherein each time slot
  - 4 corresponds to a particular time interval;
  - assigning each time slot to one or more transmission sources; and
  - 6 enabling each of the plurality of transmission sources to transmit data on assigned time slots.
2. The method of claim 1, wherein the time slots are associated with a
- 2 plurality of N phases, and wherein the assigning comprises
  - assigning each of the N phases to a respective set of one or more
  - 4 transmission sources for a particular duration of time.
3. The method of claim 1, further comprising:
- 2 staggering data transmissions from the plurality of transmission sources
  - such that the data transmissions are non-overlapping, time-wise, for at least a
  - 4 particular duration of time.
4. The method of claim 3, wherein the amount of staggering is
- 2 dependent on data rates of the data transmissions from the plurality of
  - transmission sources.
5. The method of claim 1, further comprising:
- 2 determining a particular level of interference to achieve for at least one
  - transmission source; and
  - 4 identifying one or more interfering transmission sources contributing to
  - the interference, and
  - 6 wherein the assigning is performed to achieve the particular level of
  - interference for the at least one transmission source.

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6. The method of claim 1, wherein the data to be transmitted is for a  
2 control channel in the communication system.

7. A method for transmitting data from a plurality of cells in a wireless  
2 communication system, comprising:

defining time slots for data transmission, wherein each time slot  
4 corresponds to a predetermined time interval;

associating the time slots with N phases, wherein N is greater than one;

6 assigning each of the N phases to a respective set of one or more cells for  
a particular duration of time; and

8 enabling data transmission at each of the plurality of cells on one or  
more phases assigned to the cell.

8. The method of claim 7, wherein N is four.

9. The method of claim 7, further comprising:

2 staggering data transmissions from the plurality of cells to reduce  
interference.

10. The method of claim 9, wherein the staggering is achieved by  
2 assigning each of the plurality of cells to a respective one of the N phases  
for the particular duration of time.

11. The method of claim 9, further comprising:

2 sending messages indicative of a particular staggering pattern to be used  
for transmission of traffic data.

12. The method of claim 9, further comprising:

2 increasing data rates of the data transmissions from the plurality of cells  
as a result of the staggering.

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13. The method of claim 9, wherein the amount of staggering is based on  
2 data rates used for the data transmissions.

14. The method of claim 9, further comprising:  
2 designating a particular number of time slots within each transmission  
cycle whereby data transmissions from the plurality of cells are staggered,  
4 wherein each transmission cycle includes a plurality of time slots.

15. The method of claim 7, further comprising:  
2 identifying, from among the plurality of cells, a disadvantaged cell  
experiencing excessive interference;  
4 identifying one or more interfering cells contributing to the excessive  
interference; and  
6 assigning the one or more interfering cells to different phases than the  
phase assigned to the disadvantaged cell.

16. The method of claim 7, further comprising:  
2 assigning one or more phases to a particular cell for the particular  
duration of time; and  
4 for the particular duration of time, preventing remaining ones of the  
plurality of cells from transmitting on the one or more phases assigned to the  
6 particular cell.

17. The method of claim 7, further comprising:  
2 assigning one or more phases to a particular cell for the particular  
duration of time;  
4 transmitting, from the particular cell, data at a particular data rate on the  
one or more assigned phases; and  
6 for the particular duration of time, preventing remaining ones of the  
plurality of cells from transmitting on the one or more phases assigned to the

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8 particular cell to enable the cell to achieve reliable data transmission at the  
particular data rate.

18. The method of claim 17, wherein the particular data rate is a lowest  
2 data rate supported by the communication system.

19. The method of claim 7, wherein data transmission from at least one  
2 of the plurality of cells is for a control channel.

20. The method of claim 19, wherein each data transmission on the  
2 control channel is identified by a preamble included in the data transmission.

21. The method of claim 7, the communication system is a CDMA  
2 communication system.

22. A method for transmitting data from a plurality of cells in a CDMA  
2 communication system, comprising:

defining time slots for data transmission, wherein each time slot  
4 corresponds to a predetermined time interval;

associating the time slots with four different phases, wherein each  
6 successive group of four time slots includes four time slots respectively  
associated with the four different phases;

8 assigning each of the four phases to a respective set of one or more cells  
for a particular duration of time, wherein the cells are assigned phases such that  
10 data transmissions from the plurality of cells are staggered to reduce  
interference; and

12 enabling data transmission at each of the plurality of cells on one or  
more phases assigned to the cell.

23. An access point in a wireless communication systems, comprising:

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2 a data processor configured to receive and process a data packet to  
provide a plurality of slots; and

4 a controller operatively coupled to the data processor and configured to  
direct transmission of the plurality of slots over a plurality of time slots  
6 assigned to the access point, and to prevent transmission over one or more time  
slots designated for no transmission by the access point.

24. The access point of claim 23, wherein the data packet includes a field indicative of an offset for the plurality of time slots assigned for transmission of the data packet.